

2022 Environmental Dashboard: Toronto (Uranium)

At BWXT Nuclear Energy Canada Inc.'s (BWXT NEC) Toronto facility, air and water emissions are continuously measured for the presence of uranium and results show the 1025 Lansdowne Avenue facility has very low emissions.

Airborne and liquid effluent discharged from a fuel fabrication facility like BWXT NEC are regulated by concentration limits. Action Levels and our own internal limits are set at just a fraction of the Licence Release Limits, which are set by the Canadian Nuclear Safety Commission (CNSC), to keep public exposure to any radiation as low as possible. Although Action Levels are set below Licence Release Limits, exceeding an Action Level is considered a CNSC reportable event in which BWXT NEC must notify the Commission within 24 hours of becoming aware that an Action Level has been exceeded. Accordingly, BWXT NEC has established Internal Control Levels for various radiological and environmental parameters that are set even lower than Action Levels to act as an early warning system. An Internal Control Level exceedance results in internal investigation and corrective and preventive action.

Water: Water is used in the production process and to clean protective clothing, floors and other janitorial functions. The water is first held in storage tanks at the facility, treated to remove uranium dioxide, tested and only released in batches once the test results confirm it meets release requirements. The Licence Release Limit for uranium water emissions is 1,000 mg/L (weekly composite) and the Action Level is 3 mg/L.

Air: The Toronto facility performs continuous in-stack sampling and boundary air monitoring for uranium:

Stack: The facility performs continuous in-stack monitoring of its six stacks, drawing a sample of air across a filter capable of trapping uranium dust. The samples are analyzed in-house daily and verified externally by an independent laboratory. The Action Level is 1 $\mu\text{g}/\text{m}^3$ and the most conservative (lowest) Licence Release Limit for stack (air) uranium emissions of all six stacks is 47 $\mu\text{g}/\text{m}^3$.

Boundary: Boundary samples are high volume air samples drawn at five positions strategically located around the facility perimeter. Boundary samples are analyzed externally by an independent laboratory. In both cases the external independent laboratory tests the filter papers by delayed neutron activation analysis. The Action Level is 0.08 $\mu\text{g}/\text{m}^3$.

To continue to demonstrate transparency and provide information to the public, BWXT NEC has developed this Environmental Dashboard to provide more detail on our low uranium emissions. This document will be updated throughout the year when new data becomes available.

For more information, please visit the Environment page of our website at nec.bwxt.com/environmental-monitoring or refer to our Annual Compliance Reports, a thorough document submitted to the CNSC annually, which can be found at nec.bwxt.com/safety/our-compliance-record.

If you have any questions, please contact us at questions@bwxt.com or 1.855.696.9588 (toll-free).

2022 Environmental Dashboard: Toronto (Uranium)

Water			
Status: no action level exceedances			
Week	Concentration (mg/L)	Licence Release Limit (mg/L)	Number of Action Level Exceedances
Jan 3	0.32	1000	0
Jan 10	0.16	1000	0
Jan 17	0.19	1000	0
Jan 24	0.21	1000	0
Jan 31	0.39	1000	0
Feb 7	0.36	1000	0
Feb 14	0.29	1000	0
Feb 21	0.84	1000	0
Feb 28	0.24	1000	0
Mar 7	0.25	1000	0
Mar 14	0.58	1000	0
Mar 21		1000	
Mar 28		1000	
Apr 4		1000	
Apr 11		1000	
Apr 18		1000	
Apr 25		1000	
May 2		1000	
May 9		1000	
May 16		1000	
May 23		1000	
May 30		1000	
Jun 6		1000	
Jun 13		1000	
Jun 20		1000	
Jun 27		1000	
Jul 4		1000	
Jul 11		1000	
Jul 18		1000	
Jul 25		1000	
Aug 1		1000	
Aug 8		1000	
Aug 15		1000	
Aug 22		1000	
Aug 29		1000	
Sep 5		1000	
Sep 12		1000	
Sep 19		1000	
Sep 26		1000	
Oct 3		1000	
Oct 10		1000	
Oct 17		1000	
Oct 24		1000	
Oct 31		1000	
Nov 7		1000	
Nov 14		1000	
Nov 21		1000	
Nov 28		1000	
Dec 5		1000	
Dec 12		1000	
Dec 19		1000	
Dec 26		1000	

Stack (Air)			
Status: no action level exceedances			
Week	Average Concentration (µg/m ³)	Licence Release Limit (µg/m ³)	Number of Action Level Exceedances
Jan 3	0.01	47	0
Jan 10	0.01	47	0
Jan 17	0.02	47	0
Jan 24	0.02	47	0
Jan 31	0.01	47	0
Feb 7	0.01	47	0
Feb 14	0.01	47	0
Feb 21	0.03	47	0
Feb 28	0.01	47	0
Mar 7	0.01	47	0
Mar 14	0.01	47	0
Mar 21	0.01	47	0
Mar 28	0.01	47	0
Apr 4	0.01	47	0
Apr 11	0.01	47	0
Apr 18	0.01	47	0
Apr 25	0.01	47	0
May 2	0.03	47	0
May 9	0.03	47	0
May 16		47	
May 23		47	
May 30		47	
Jun 6		47	
Jun 13		47	
Jun 20		47	
Jun 27		47	
Jul 4		47	
Jul 11		47	
Jul 18		47	
Jul 25		47	
Aug 1		47	
Aug 8		47	
Aug 15		47	
Aug 22		47	
Aug 29		47	
Sep 5		47	
Sep 12		47	
Sep 19		47	
Sep 26		47	
Oct 3		47	
Oct 10		47	
Oct 17		47	
Oct 24		47	
Oct 31		47	
Nov 7		47	
Nov 14		47	
Nov 21		47	
Nov 28		47	
Dec 5		47	
Dec 12		47	
Dec 19		47	
Dec 26		47	

Boundary (Air)			
Status: no action level exceedances			
Week	Average Concentration (µg/m ³)	Action Level (µg/m ³)	Number of Action Level Exceedances
Jan 3	0.0005	0.08	0
Jan 10	0.0002	0.08	0
Jan 17	0.0005	0.08	0
Jan 24	0.0012	0.08	0
Jan 31	0.0003	0.08	0
Feb 7	0.0003	0.08	0
Feb 14	0.0004	0.08	0
Feb 21	0.0003	0.08	0
Feb 28	0.0003	0.08	0
Mar 7	0.0002	0.08	0
Mar 14	0.0003	0.08	0
Mar 21	0.0003	0.08	0
Mar 28	0.0001	0.08	0
Apr 4	0.0002	0.08	0
Apr 11	0.0006	0.08	0
Apr 18	0.0003	0.08	0
Apr 25	0.0003	0.08	0
May 2	0.0003	0.08	0
May 9		0.08	
May 16		0.08	
May 23		0.08	
May 30		0.08	
Jun 6		0.08	
Jun 13		0.08	
Jun 20		0.08	
Jun 27		0.08	
Jul 4		0.08	
Jul 11		0.08	
Jul 18		0.08	
Jul 25		0.08	
Aug 1		0.08	
Aug 8		0.08	
Aug 15		0.08	
Aug 22		0.08	
Aug 29		0.08	
Sep 5		0.08	
Sep 12		0.08	
Sep 19		0.08	
Sep 26		0.08	
Oct 3		0.08	
Oct 10		0.08	
Oct 17		0.08	
Oct 24		0.08	
Oct 31		0.08	
Nov 7		0.08	
Nov 14		0.08	
Nov 21		0.08	
Nov 28		0.08	
Dec 5		0.08	
Dec 12		0.08	
Dec 19		0.08	
Dec 26		0.08	

Note: if you would like the Dashboard table in .xls format (Excel), please email us at questions@bwxt.com.